IN THE CLAIMS:

Please substitute the following claims for the same-numbered claims in the application:

1. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

acquiring a waveform of data for a critical dimension structure;

determining a stepper focus parameter for said critical dimension structure;

calculating an approximate critical dimension measurement for said critical dimension structure;

calibrating said data of said waveform by determining at least three best fit data parameters for improving a linearity of said waveform;

combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes structural bias parameters from said approximate critical dimension measurement; and

generating said optimum critical dimension value from said combining, wherein said optimum critical dimension value comprises structural measurements of said critical dimension structure that are only relevant to a critical dimension of said critical dimension structure.

2. (Previously Presented) The method of claim 1, wherein said determining comprises:

navigating to a stepper focus monitor target;

performing a scanning electron microscope focusing; and

performing a final alignment of said target.

3. (Previously Presented) The method of claim 2, wherein said determining further comprises:

acquiring the waveform data;

analyzing said waveform data; and

determining said stepper focus parameter based on said analyzing.

4. (Previously Presented) The method of claim 2, wherein said determining further comprises:

acquiring an image data;

analyzing said image data; and

determining said stepper focus parameter based on said analyzing.

5. (Previously Presented) The method of claim 1, wherein said generating comprises:

navigating to said critical dimension structure;

performing a scanning electron microscope focusing; and

performing a final alignment of said critical dimension structure.

6. (Previously Presented) The method of claim 5, wherein said generating further comprises:

acquiring the waveform data;

analyzing said waveform data; and

determining said optimum critical dimension value based on said analyzing.

7. (Previously Presented) The method of claim 5, wherein said generating further comprises:

acquiring an image data;

analyzing said image data; and

determining said optimum critical dimension value based on said analyzing.

8. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

generating a scanning electron microscope focus;

generating a waveform data based on output from said scanning electron microscope focus;

analyzing said waveform data to determine an approximate critical dimension measurement;

calibrating said waveform data by determining at least three best fit data parameters for improving a linearity of said waveform data;

analyzing said waveform data to determine a stepper focus parameter;

combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes structural bias from said approximate critical dimension measurement; and

generating said optimum critical dimension value from said combining, wherein said optimum critical dimension value comprises structural measurements of a critical dimension structure that are only relevant to a critical dimension of said critical dimension structure.

9. (Previously Presented) The method of claim 8, wherein said generating a waveform data further comprises:

navigating to a critical dimension structure;

performing a scanning electron microscope focusing;

performing a final alignment of said critical dimension structure; and

acquiring said waveform data based on said scanning electron microscope focusing and said final alignment.

10. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

generating a scanning electron microscope focus;

generating an image data based on output from said scanning electron microscope focus;

analyzing said image data to determine an approximate critical dimension measurement;

calibrating said image data by determining at least three best fit data parameters for improving a linearity of said image data;

analyzing said image data to determine a stepper focus parameter;

combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes structural bias from said approximate critical dimension measurement; and

generating said optimum critical dimension value from said combining, wherein said optimum critical dimension value comprises structural measurements of a critical dimension structure that are only relevant to a critical dimension of said critical dimension structure.

11. (Previously Presented) The method of claim 10, wherein said generating an image data further comprises:

navigating to a critical dimension structure;

performing a scanning electron microscope focusing;

performing a final alignment of said critical dimension structure; and

acquiring said image data based on said scanning electron microscope focusing and said final alignment.

12. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

acquiring data representative of a critical dimension structure;

determining a stepper focus parameter for said critical dimension structure;

measuring an approximate critical dimension measurement for said critical dimension structure;

calibrating said data by determining at least three best fit data parameters for improving a linearity of said data;

combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes structural bias parameters from said approximate critical dimension measurement; and

generating said optimum critical dimension value based on said combining, wherein said optimum critical dimension value comprises structural measurements of said critical dimension structure that are only relevant to a critical dimension of said critical dimension structure.

13. (Previously Presented) The method of claim 12, wherein said determining comprises:

navigating to a stepper focus monitor target;

performing a scanning electron microscope focusing; and

performing a final alignment of said target.

14. (Previously Presented) The method of claim 13, wherein said determining further comprises:

acquiring a waveform data;

analyzing said waveform data; and

determining said stepper focus parameter based on said analyzing.

15. (Previously Presented) The method of claim 13, wherein said determining further comprises:

acquiring an image data;

analyzing said image data; and

determining said stepper focus parameter based on said analyzing.

16. (Previously Presented) The method of claim 12, wherein said generating comprises:

navigating to said critical dimension structure;

performing a scanning electron microscope focusing; and

performing a final alignment of said critical dimension structure.

17. (Previously Presented) The method of claim 16, wherein said generating further

comprises:

acquiring a waveform data;

analyzing said waveform data; and

determining said optimum critical dimension value based on said analyzing.

18. (Previously Presented) The method of claim 16, wherein said generating further comprises:

acquiring an image data;

analyzing said image data; and

determining said optimum critical dimension value based on said analyzing.

19. (Currently Amended) A method of producing an optimum critical dimension value, said method comprising:

acquiring data representative of a critical dimension structure;

determining a stepper focus parameter for said critical dimension structure;

measuring an approximate critical dimension measurement for said critical dimension structure;

calibrating said data by determining at least three best fit data parameters for improving a linearity of said data;

combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes structural bias parameters from said approximate critical dimension measurement; and

generating said optimum critical dimension value based on said combining, wherein said

optimum critical dimension value comprises structural measurements of said critical dimension structure that are only relevant to a critical dimension of said critical dimension structure;

wherein said determining further comprises:

navigating to a stepper focus monitor target;

performing a scanning electron microscope focusing at said target;

performing a final alignment of said target based on said scanning electron microscope focusing at said target;

acquiring a first data set from said scanning electron microscope focusing;

analyzing said first data set; and

determining said stepper focus parameter based on said analyzing;

wherein said generating further comprises:

navigating to said critical dimension structure;

performing a scanning electron microscope focusing at said critical dimension structure;

performing a final alignment of said critical dimension structure;

acquiring a second data set from said scanning electron microscope focusing at said critical dimension structure;

analyzing said second data set; and

determining said optimum critical dimension value based on said analyzing.

20. (Currently Amended) A program storage device readable by a computer, tangibly embodying a program of instructions executable by the computer to perform a method of producing an optimum critical dimension value, said method comprising:

acquiring a waveform of data for a critical dimension structure;

determining a stepper focus parameter for said critical dimension structure;

calculating an approximate critical dimension measurement for said critical dimension structure;

calibrating said data of said waveform by determining at least three best fit data parameters for improving a linearity of said waveform;

combining said stepper focus parameter with said approximate critical dimension measurement and said best fit data parameters, wherein said combining removes structural bias parameters from said approximate critical dimension measurement; and

generating said optimum critical dimension value from said combining, wherein said optimum critical dimension value comprises structural measurements of said critical dimension structure that are only relevant to a critical dimension of said critical dimension structure.

21. (Previously Presented) The program storage device of claim 20, wherein in said method said determining comprises:

navigating to a stepper focus monitor target;

performing a scanning electron microscope focusing; and

performing a final alignment of said target.

22. (Previously Presented) The program storage device of claim 21, wherein in said method said determining further comprises:

acquiring the waveform data;

analyzing said waveform data; and

determining said stepper focus parameter based on said analyzing.

23. (Previously Presented) The program storage device of claim 21, wherein in said method said determining further comprises:

acquiring an image data;

analyzing said image data; and

determining said stepper focus parameter based on said analyzing.

24. (Previously Presented) The program storage device of claim 20, wherein in said method said generating comprises:

navigating to said critical dimension structure;

performing a scanning electron microscope focusing; and

performing a final alignment of said critical dimension structure.

25. (Previously Presented) The program storage device of claim 24, wherein in said method said generating further comprises:

acquiring the waveform data;

analyzing said waveform data; and

determining said optimum critical dimension value based on said analyzing.

26. (Previously Presented) The program storage device of claim 24, wherein in said method said generating further comprises:

acquiring an image data;

analyzing said image data; and

determining said optimum critical dimension value based on said analyzing.